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ABSTRACT

This briefing paper uses a question-and-answer format to provide basic information about children and adolescents with attention deficit/hyperactivity disorder (AD/HD). It is intended to help parents, teachers, and others interested in AD/HD know what to look for, what to do, and how to get help. Questions address the following concerns: nature and incidence of ADD; causes of ADD; signs of ADD (inattention, hyperactivity, impulsivity, hyperactivity, disorganization, and disinhibition); the diagnostic AD/HD assessment; how to get one's child evaluated for AD/HD; treatment of AD/HD (education about the disorder, behavior management, medication, and appropriate educational programming); determining if special education will help a child with AD/HD; determining the eligibility of a child for special education services; the child's legal rights for special education; what teachers can do to help a child with AD/HD (includes tips for adapting curriculum and instruction, providing supports to promote executive function, using memory boosters, and using attention getters and keepers), and locating a support group. Four inserts list disorders that co-occur with AD/HD, discuss early intervention services, list ways to improve life in general, and list teaching strategies. A selected bibliography lists 12 references, 4 relevant organizations, and 27 books and videos. (CR)

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FS14, 3rd Edition, April 2002

BRIEFING PAPER

*A publication of the National Information Center for Children and Youth with Disabilities*

# Attention-Deficit/ Hyperactivity Disorder

ED 469 852

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*by Mary Fowler*

Every year the National Information Center for Children and Youth with Disabilities (NICHCY) receives thousands of requests for information about the education and special needs of children and youth with attention-deficit/ hyperactivity disorder (AD/HD). If your child or teen has AD/HD, or if you suspect that to be the case, you might be overwhelmed by the available information. A lot of that information is based on good scientific research. However, some of it is not scientifically accurate.

This NICHCY *Briefing Paper* is written to help parents, teachers, and others interested in AD/HD know what to look for, what to do, and how to get help. Although many people refer to attention-deficit/hyperactivity disorder as ADD, throughout this paper the disorder is called by its medically correct name of AD/HD.

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## What is AD/HD?

AD/HD is one of the most commonly diagnosed behavioral disorders of childhood. The disorder is estimated to affect between 3 to 7 out of every 100 school-aged children [American Psychiatric Association (APA), 2000]. This makes AD/HD a major health concern. The disorder does not affect only children. In many cases, problems continue through adolescence and adulthood.

The core symptoms of AD/HD are developmentally inappropriate levels of inattention, hyperactivity, and impulsivity. These problems are persistent and usually cause difficulties in one or more major life areas: home, school, work, or social relationships. Clinicians base their diagnosis on the presence of the core characteristics and the problems they cause.

Not all children and youth have the same type of AD/HD. Because the disorder varies among individuals, children with AD/HD won't all have the same problems. Some may be hyperactive. Others may be under-active. Some may have great problems with attention. Others may be mildly inattentive but overly impulsive. Still others may have significant problems in all three areas (attention, hyperactivity, and impulsivity).

Thus, there are three subtypes of AD/HD:

A. Predominantly Inattentive Type

B. Predominantly Hyperactive-Impulsive Type

C. Combined Type (inattention, hyperactivity-impulsivity)

Of course, from time to time, practically every person can be a bit absent-minded, restless, fidgety, or impulsive. So why are these same patterns of behavior considered normal for some people and symptoms of a disorder in others? It's partly *a matter of degree*. With AD/HD, these behaviors occur far more than occasionally. They are the *rule* and not the exception.

## What Causes AD/HD?

AD/HD is a very complex, neurobiochemical disorder. Researchers do not know AD/HD's exact causes, as is the case with many mental and physical health conditions. Where AD/HD is concerned, there are a few individuals who do not believe AD/HD really exists. As researchers continue to learn more about AD/HD, this controversy will be put to rest. Meanwhile, scientists are making great strides in unlocking the mysteries of the brain. Recent technological advances in brain study are providing strong clues as to both the presence of AD/HD and its causes. In people with the disorder, these studies show that certain brain areas have less activity and blood flow and that certain brain structures are slightly smaller. These differences in brain activity and structure are mainly evident in the prefrontal cortex, the basal ganglia, and the cerebellum (Castellanos & Swanson, in press). These areas are known to help us inhibit behavior, sustain attention, and control mood.

There is also strong evidence to suggest that certain chemicals in the brain—called *neurotransmitters*—play a large role in AD/HD-type behaviors. Neurotransmitters help brain cells communicate with each other. The neurotransmitter that seems to be most involved with AD/HD is called dopamine. Dopamine is widely used throughout the brain. Scientists have discovered a genetic basis for part of the dopamine problem that exists in some individuals with AD/HD. Scientists also think that the neurotransmitter called norepinephrine is involved to some extent. Other neurotransmitters are being studied as well (Castellanos & Swanson, in press).

When neurotransmitters don't work the way they are supposed to, brain systems function inefficiently. Problems result. With AD/HD, these are manifested to the world as inattention, hyperactivity, impulsivity, and related behaviors.

Children with AD/HD are often blamed for their behavior. However, it's not a matter of their *choosing* not to behave. It's a matter of "can't behave *without the right help.*" AD/HD interferes with a person's ability to behave appropriately.

And speaking of blame—parents and teachers do *not* cause AD/HD. Still, there are many things that both parents and teachers can do to help a child or teen manage his or her AD/HD-

related difficulties. Before we look at what needs to be done, however, let us look at what AD/HD is and how it is diagnosed.

## How is AD/HD Diagnosed?

AD/HD is considered a mental health disorder. Only a licensed professional, such as a pediatrician, psychologist, neurologist, psychiatrist, or clinical social worker, can make the diagnosis that a child, teen, or adult has AD/HD. These professionals use the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised* (DSM-IV-TR) as a guide (APA, 2000).

Over the last 10 years, public awareness about AD/HD has led to more children and adults being diagnosed with the disorder. Some people have expressed concern that the condition is being *over*diagnosed. The American Medical Association (AMA) took a serious look into these claims. According to AMA's Special Council Report, however, there is little evidence of widespread overdiagnosis of AD/HD or overprescription of medication for the disorder (Goldman et al., 1998).

In order to be diagnosed with AD/HD, children and youth must meet the specific diagnostic criteria set forth in the DSM-IV-TR. These criteria are primarily associated with the main features of the disability: inattention, hyperactivity, and impulsivity. Let's take a closer look at the specific types of behavior that must be evident in order for a diagnosis of AD/HD to be made.

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***Inattention***

Attention is a process. When we pay attention:

- we *initiate* (direct our attention to where it is needed or desired at the moment);
- we *sustain* (pay attention for as long as needed);
- we *inhibit* (avoid focusing on something that removes our attention from where it needs to be); and finally
- we *shift* (move our attention to other things as needed).

***...the main features of the disability [are]: inattention, hyperactivity, and impulsivity.***

Children with AD/HD can pay attention. Their problems have to do with what they are paying attention to, for how long, and under what circumstances. It's not enough to say that a child has a problem paying attention. We need to know *where* the process is breaking down for the child so that appropriate individualized remedies can be created.

With AD/HD, we see three common areas of inattention problems:

- sustaining attention long enough, especially to boring, tedious, or repetitious tasks;
- resisting distractions, especially to things that are more interesting or that fill in the gaps when sustained attention quits; and
- not paying sufficient attention, especially to details and organization.

These attention difficulties result in incomplete assignments, careless errors, and messy work. Children with AD/HD often tune out activities that are dull, uninteresting, or unstimulating. Their performance is inconsistent both at home and in school. Social situations are affected by frequent shifts or losing track of conversations, not listening to others, and not following directions to games or rules (APA, 2000).

Symptoms of inattention, as listed in the DSM-IV-TR*, are:

(a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities;

(b) often has difficulty sustaining attention in tasks or play activities;

(c) often does not seem to listen when spoken to directly;

(d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions);

(e) often has difficulty organizing tasks and activities;

(f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework);

(g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools);

(h) is often easily distracted by extraneous stimuli;

(i) is often forgetful in daily activities. (APA, 2000, p. 92*)

***Hyperactivity***

Excessive activity is the most visible sign of AD/HD. Studies show that these children are more active than those without the disorder, even during sleep. The greatest differences are usually seen in school settings (Barkley, 2000). Many parents find their toddlers and preschoolers quite active. Care must be given before labeling a young one as hyperactive. At this developmental stage, a comparison should be made between the child and his or her same-age peers without AD/HD. In young children, usually the hyperactivity of AD/HD will come across as "always on the go" or "motor driven." You may see behaviors such as darting out of the house or into the street, excessive climbing, and less time spent with any one toy. In elementary years, children with AD/HD will be more fidgety and squirmy than their same-age peers who do not have the disorder. They also are up and out of their seats more. Adolescents and adults feel more restless and bothered by quiet activities. At all ages, excessive and loud talking may be apparent. (APA, 2000)

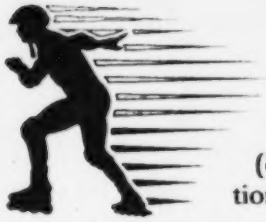
Symptoms of hyperactivity, as listed in the DSM-IV-TR*, are:

(a) often fidgets with hands or feet or squirms in seat;

(b) often leaves seat in classroom or in other situations in which remaining seated is expected;

(c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness);

(d) often has difficulty playing or engaging in leisure activities quietly;



(e) is often "on the go" or often acts as if "driven by a motor;"

(f) often talks excessively. (APA, 2000, p. 92*)

***Impulsivity***

Children and youth with AD/HD often act without fully considering the circumstances or the consequences. Actually, thinking about the potential outcomes of their actions before the fact often does not even cross their minds. Their neurobiologically caused problem with impulsivity makes it hard to delay gratification. Waiting even a little while is too much for their biological drive to *have it now*.

The impulsivity leads these children to speak out of turn, interrupt others, and engage in what looks like risk-taking behavior. The child may run across the street without looking or climb to the top of very tall trees. Although such behavior is risky, the child is not so much a risk-taker as a child who has great difficulty controlling impulse and anticipating consequences. Often, the child is surprised to discover that he or she has gotten into a dangerous situation and has no idea of how to get out of it. Some studies show that these children are more accident prone, particularly those youth who are somewhat stubborn or defiant (Barkley, 2000).

Symptoms of impulsivity, as listed in the DSM-IV-TR (APA, 2000, p. 92*), are:

(g) often blurts out answers before questions have been completed;

(h) often has difficulty awaiting turn;

(i) often interrupts or intrudes on others (e.g., butts into conversations or games).

For a diagnosis of *predominantly inattentive type* of AD/HD, six or more of the inattention symptoms must be present (see list on page 3). For a diagnosis of *hyperactive/impulsive type*, six or more of the hyperactivity or impulsivity symptoms must be present (see lists on this page). For a diagnosis of *combined type*, six or more symptoms of inattention, plus six or more symptoms of hyperactivity or impulsivity, must be present.

The word *often* appears before each symptom of inattention, hyperactivity, and impulsivity in the DSM-IV-TR. In order to be considered a symptom of AD/HD, a behavior can't be "a once in a while" problem. Nor can it be a problem that pops up all of a sudden. According to the DSM-IV-TR, the following must be true:

- There must be clear evidence of significant difficulty in two or more settings (e.g., at home, in school, with peers, or at work).
- Symptoms of inattention, hyperactivity, or impulsivity must be present at least six months.
- Some of these symptoms have to cause problems before age 7.
- The symptoms have to be developmentally inappropriate.

"Developmentally inappropriate" is an important point. If you look again at the symptom list for the three main features of AD/HD, you will notice that some of these behaviors may be fairly normal at certain ages. For instance, no one

expects a two year old to keep track of toys or to stay seated for very long. So, losing things or not being able to stay in a chair for long would not be considered symptoms of AD/HD at that age. These same behaviors in a ten year old, however, would be *developmentally inappropriate*. We don't expect a ten year old to constantly lose things. We do expect a ten year old to be able to stay seated during a half-hour of class or a family dinner.

AD/HD is determined by the number of symptoms present and the extent of the difficulty these cause. Also, the number of symptoms and the problems they cause may change across the life span. In a small number of cases, AD/HD does go away in adolescence or adult years. However, in most cases, the problems shift. A hyperactive-impulsive fourteen year old may be able to stay seated longer than he or she could at age nine. While problems caused by hyperactivity-impulsivity seem to lessen with age, other AD/HD-related symptoms usually become more problematic. For instance, demands for longer periods of sustained attention increase with age. So, for example, even though a fourteen year old may sit still during a lengthy reading assignment, he or she may be bothered by an inability to concentrate.

## What Are Other Signs of AD/HD?

Research is showing us that AD/HD impairs the brain's executive function ability. It's as if the brain has too many workers but no boss to direct or guide them. When the brain's executive function abilities operate appropriately, we think, plan, organize, direct, and monitor our thoughts and activities. In essence, our brain has a capable executive or boss.

Of course, none of us is born being our own executive. We acquire these skills as our brains develop and mature. Until we are able to monitor and regulate our own activities and lives, we rely on people and things outside of ourselves to guide and direct us. Puberty marks the time when we become increasingly "brain-able" to be our own boss.

Our executive abilities also help us to concentrate longer and to keep track of our thoughts, especially those we need later. We are less distracted by our own thoughts and find it much easier to return to work after we've been distracted.

The brain's executive abilities also help us inhibit, or control, behavior. Inhibition is the ability to delay or pause before acting or doing. It allows us to regulate our thoughts, actions, and feelings. This self-regulation or self-control helps us manage or limit behavior. We learn to say "not now" or "not a good idea" to impulse. We learn to control our activity levels to meet situational demands. For example, to yell at a ball game is fine (unless we are shouting in someone's ear). Yelling in a classroom is usually not okay.

Thanks to our brain's executive abilities, we become driven more by intention than impulse. That means we pause and reflect before we act. For instance, we are able to consider the demands of a situation along with the rules. We can delay an immediate reward in order to hold out for a later reward that's more meaningful.

With AD/HD, the very brain areas responsible for executive function and inhibition are impaired. Children with AD/HD can be considered hyperresponsive, because they behave too much. They are more likely to respond to events that others usually overlook (Barkley, 2000). Their characteristic disinhibition often causes others to find them annoying, irritating, or exasperating.

*Research is showing us that AD/HD impairs the brain's executive function ability... [which allows us to] think, plan, organize, direct, and monitor our thoughts and activities.*

Obviously, executive function difficulties can create distress and problems with daily functioning, including emotional control. In addition to symptoms of inattention, impulsivity, and hyperactivity, you may also see these types of executive function problems:

- weak problem solving,
- poor sense of time and timing,
- inconsistency,
- difficulty resisting distraction,
- difficulty delaying gratification,
- problems working toward long-term goals,
- low "boiling point" for frustration,
- emotional over-reactivity,
- changeable mood, and
- poor judgment.

It's important to remember that the self-control and self-regulation problems seen in people with AD/HD are not a matter of deliberate choice. These problems are caused by neurological events or conditions. People with AD/HD know how to behave. They generally know what is expected in a given situation. But they run into trouble at the *point of performance*—that moment in time when they must inhibit behavior to meet situational demands. Their troubles may show up in how they act in the outside world, or in their internal selves. They characteristically have inconsistent performance. This inconsistency is often mistaken for a lack of regard or respect, or as a lack of effort.

Because of inhibition problems, the disorder also makes it hard for the young person to follow the rules, especially if the rules are not crystal clear. Children with AD/HD usually need a lot of incentive to follow the rules, too. That doesn't mean that they are intentionally bratty or demanding. When a child's executive and inhibition mechanisms are not functioning fully or normally, then we need to provide external incentives to pump up the child's ability to inhibit thoughts, feelings, and actions.

Performance usually improves when external guides, rewards, and incentives are provided. These might include step-by-step approaches, extra praise and encouragement, and the chance to earn special privileges for better performance. More will be said about these approaches in Section II of this *Briefing Paper*.

## How Do I Know For Sure That My Son or Daughter Has AD/HD?

At present, no laboratory test exists to determine if your child has this disorder. You can't diagnose AD/HD with a urinalysis, blood test, CAT scan, MRI, EEG, PET or SPECT scan, although some of these technologies are used for research purposes.

Diagnosing AD/HD is complicated and much like putting together a puzzle. You, as a parent, may *think* your child has AD/HD, but an accurate diagnosis requires an assessment conducted by a well-trained licensed professional (usually a developmental pediatrician, child psychologist, child psychiatrist, pediatric neurologist, or clinical social worker). This person must know a lot about AD/HD and all other disorders that can have symptoms similar to those found in AD/HD. Until the practitioner has collected and evaluated all the necessary information, he or she—like you, the parent—can only *assume* that the child *might* have AD/HD.

The AD/HD diagnosis is made on the basis of the observable behavioral symptoms listed on pages 3 and 4. The symptoms of AD/HD must occur in more than one setting. The person doing the evaluation must use *multiple sources of information*. Since symptoms of AD/HD can also be associated with many other conditions, be wary of any practitioner who makes a snap diagnosis either because you've said you think your child has AD/HD or because he or she has observed the child once. Children with AD/HD commonly behave well on the first meeting. Furthermore, personal observation is only one source of information.

## What is the Recommended Diagnostic Procedure?

The American Academy of Pediatrics (2000) recommends that clinicians collect the following information when evaluating a child for AD/HD:

1. A thorough medical and family history.

2. A medical examination for general health and neurologic status.

3. A comprehensive interview with the parents, teachers, and child.

4. Standardized behavior rating scales, including AD/HD-specific ones completed by parents, teacher(s), and the child when appropriate. (Know that people with AD/HD typically are not great at accurately reporting symptoms of the disorder, because it causes them to have poor insight into their own behavior.)

5. Observation of the child.

6. A variety of psychological tests to measure IQ and social and emotional adjustment. These tests also help to determine the presence of specific learning disabilities, which can co-occur with AD/HD.

Once the practitioner completes the evaluation, he or she makes one of three determinations:

1. The child does or does not have AD/HD.

2. The child does not have AD/HD, but either has another disorder(s) or other factors that have created the difficulties.

3. The child has AD/HD *and* another disorder (called a *co-existing condition*).

To make the first determination—that the child has or does not have AD/HD—the clinician considers his or her findings in relation to the criteria of the DSM-IV-TR mentioned earlier.

To make the second determination—that the child's difficulties are caused by another disorder or other factors—the professional first considers the disorders that have symptoms similar to AD/HD. You should be aware that some mental health disorders have their onset after puberty, but early warning signs, which are very similar to AD/HD symptoms, may be present. Thus, it is possible for a diagnosis to change as the child develops and other disorders become more apparent. It is also possible for a child or youth to have more than one disorder, or co-occuring disorders.

Generally, the DSM-IV-TR requires clinicians to rule out AD/HD if they see Pervasive Developmental Disorder (PDD), schizophrenia, other psychotic disorders, or if the symptoms are better explained by another disorder. For instance, although not very common, Bipolar Disorder (BPD) can be mistaken for AD/HD in early years.

It is also true that major stressful life events can result in temporary symptoms that look like AD/HD. Such events could include parental divorce, child abuse, death of a loved one, a move, or a sudden traumatic experience. Under these circumstances, AD/HD-like symptoms may arise suddenly and, therefore, would have no long-term history. Remember, AD/HD symptoms must exist for at least six months and cause some difficulty before the age of seven. Of course, a child can have AD/HD *and* a stressful event, so such events do not automatically rule out the existence of AD/HD.

To make the third determination—that the child has AD/HD and a co-existing condition—the assessor must first be aware that AD/HD can and often does co-occur with other difficulties, particularly learning disabilities, oppositional defiant disorder, and anxiety. A list of disorders that commonly co-occur with AD/HD is provided in the box below.

The fact is: Other mental health conditions such as those listed in the box below can be the *result* of AD/HD, *in addition* to AD/HD, or *mistaken* for AD/HD. That is why evaluations need to be conducted by a professional who is trained in a wide variety of child and adoles-

### Disorders That Commonly Co-Occur With AD/HD

For more information about the following disorders that frequently occur with AD/HD, see the resource list on page 21.

***Oppositional Defiant Disorder (ODD)***—A pattern of negative, hostile, and defiant behavior. Symptoms include frequent loss of temper, arguing (especially with adults), refusal to obey rules, intentionally annoying others, blaming others. The person is angry, resentful, possibly spiteful, and touchy. (Many of these symptoms disappear with AD/HD treatments.)

***Conduct Disorder (CD)***—A pattern of behavior that persistently violates the basic rights of others or society's rules. Behaviors may include aggression toward people and animals, destruction of property, deceitfulness or theft, or serious rule violations.

***Anxiety***—Excessive worry that occurs frequently and is difficult to control. Symptoms include feeling restless or on edge, easily fatigued, difficulty concentrating, irritability, muscle tension, and sleep disturbances.

***Depression***—A condition marked by trouble concentrating, sleeping, and feelings of dejection and guilt. There are many types of depression. With AD/HD you might commonly see dysthymia, which consists of a depressed mood for many days, over or under eating, sleeping too much or too little, low energy, low self-esteem, poor concentration, and feeling hopeless. Other forms of depression may also be present.

***Learning Disabilities***—Problems with reading, writing, or mathematics. When given standardized tests, the student's ability or intelligence is substantially higher than his or her achievement. Underachievement is generally considered age-inappropriate. [Note: Children with AD/HD frequently have problems with reading fluency and mathematical calculations. AD/HD learning problems have to do with attention, memory and executive function difficulties rather than dyslexia, dysgraphia, or dyscalculia, which are learning disabilities. The point here is not to overlook either. Depending on how learning disabilities are defined, between 10-90% of youth with AD/HD also have a learning disability (Robin, 1998).]

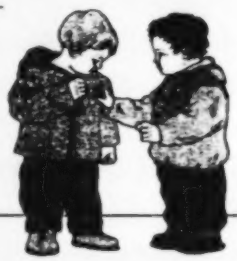
cent disorders. Thorough and correct diagnosis is an essential first step to better treatments.

### How Do I Have My Child Evaluated for AD/HD?

When your child is experiencing difficulties that suggest that he or she may have AD/HD, you as a parent can take one of two basic paths to evaluation. You can seek the services of an outside professional or clinic, or you can request that your local school district conduct an evaluation.

In pursuing a private evaluation or in selecting a professional to perform an assessment for AD/HD, you should consider the clinician's training and experience with the disorder, as well as his or her availability to coordinate the various treatment approaches. Most AD/HD parent support groups know clinicians trained to evaluate and treat children with AD/HD. You may also ask your child's pediatrician, a community mental health center, a university mental health clinic, or a hospital child evaluation unit.

It is important for you to realize, however, that the schools have an affirmative obligation to evaluate a child (aged 3 through 21) if school personnel suspect that the child might have AD/HD or any other disability that is adversely affecting educational performance. (That means the child must be having difficulties in school. Those difficulties include social, emotional, and behavioral problems, not just academic troubles.) (See the box below if your child is under three years old.) This evaluation is provided free of charge to families and must, by law, involve more than one standardized test or procedure.



Thus, if you suspect that your child has an attentional or hyperactivity problem, or know for certain that your child has AD/HD, and his or her educational performance appears to be adversely affected, you should first request that the school system evaluate your child. *Be sure to put your request in writing*. Your letter should include the date, your name, your child's name, and the reason(s) you are requesting an evaluation. The letter should state the type of educational difficulties your child is experiencing. Keep a copy of the letter in your file.

Preschoolers (children aged 3 through 5) may be eligible for services under Part B of the Individuals with Disabilities Education Act (IDEA). If your child is a preschooler, you may wish to contact the State Department of Education or local school district, ask your pediatrician, or talk with local day care providers about how to have your child assessed through your school district's special education department.

Also, under Head Start regulations, AD/HD is considered a chronic or acute health impairment entitling the child to special education services when the child's inattention, hyperactivity, and impulsivity are developmentally inappropriate, chronic, and displayed in multiple settings, and when the AD/HD severely affects performance in normal developmental tasks (for example, in planning and completing activities or following simple directions).

If your child is school-aged (six or older), and you suspect that AD/HD may be adversely affecting his or her educational performance, you can ask your local

### But My Child is a Toddler...

If your child is under three years old, and you suspect that AD/HD may be affecting his or her development, you may want to investigate what *early intervention services* are available in your state through the Part C program of the Individuals with Disabilities Education Act (IDEA).

Since AD/HD is a developmental disorder, diagnosing young children requires some special consideration. For instance, toddlers don't pay attention for long periods of time, so a clinician wouldn't necessarily find inattention in a toddler a symptom of AD/HD. Also, toddlers are more easily frustrated and do shift activities a lot. It's important that the person doing the diagnosis be very familiar with normal child development in order to determine what behaviors would be inappropriate for that age.

You can find out about the availability of early intervention services in your state by contacting the state agency responsible for administering early intervention services (which is listed on NICHCY's *State Resource Sheet*), by asking your pediatrician, or by contacting the nursery or child care department in your local hospital.

school district to conduct an evaluation. With the exception of the physical examination, the assessment can be conducted by school personnel as long as a member of the evaluation group is knowledgeable about assessing AD/HD. If not, the district may need to use an outside professional consultant trained in AD/HD assessment. This person must know what to look for during child observation, be competent to conduct structured interviews with parents, teacher(s), and child, and know how to administer and interpret behavior rating scales.

Identifying where to go and whom to contact in order to request an evaluation is just the first step. Unfortunately, many parents experience difficulty in the next step—getting the school system to agree to evaluate their child. In the past, some schools have not understood their obligations to serve children who, because of their AD/HD, are in need of special education and related services. In 1999, AD/HD was specifically listed in the federal regulations of IDEA under the disability category of "other health impairment" (see definition in the box above). The inclusion of AD/HD in this disability category should help to clarify the school's obligation to evaluate children who are suspected of having AD/HD that is adversely affecting educational performance.

**IDEA's Definition of "Other Health Impairment"**

*In order to be eligible for special education, a student must meet the definition criteria for at least 1 of 13 disability categories listed in the federal regulations. Some students may meet more than one definition. Many students with AD/HD now may qualify for special education services under the "Other Health Impairment" category within the Individuals with Disabilities Education Act (IDEA). IDEA defines "other health impairment" as...*

"...having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, and sickle cell anemia; and adversely affects a child's educational performance."

34 *Code of Federal Regulations* §300.7(c)(9)

However, if the school district does not believe that your child's educational performance is being adversely affected, it may refuse to evaluate your child. In this case, there are a number of actions you can take, including pursuing a private evaluation. It is also important to persist with the school, enlisting the assistance of an advocate, if necessary. You can generally find this type of assistance by contacting the Parent Training and Information (PTI) center for your state, the Protection and Advocacy (P&A) agency, or a local parent group. (Contact NICHCY to get a *State Resource Sheet*, which lists your state's PTI and P&A.) A school district's refusal to evaluate a child suspected of having AD/HD involves issues that must be addressed on an individual basis. Your state's PTI, P&A, or a local parent group will typically be able to provide information on a parent's legal rights, give specific suggestions on how to proceed, and in many cases offer direct assistance. You may also use a special education attorney.

For children who are evaluated by the school system, eligibility for special education and related services will be based upon evaluation results and the specific policies of the state. Many parents have found this to be a problematic area as well. Therefore, eligibility for special education services—and the services themselves—will be discussed in greater detail in Section III of this *Briefing Paper* (see page 15).

For the moment, however, let us look at what we know about managing AD/HD and the specific difficulties associated with the disorder.

## How is AD/HD Treated?

Like many medical conditions, AD/HD is managed, not cured. There's no "quick fix" that resolves the symptoms of the disorder. Yet a lot can be done to help. Through effective management, some of the secondary problems that often arise out of untreated AD/HD may be avoided. In the majority of cases, AD/HD management will be a life-long endeavor. It may be helpful to think of AD/HD as a challenge that can be met.

Recently, the National Institute of Mental Health (NIMH), in combination with the U.S. Department of Education's Office of Special Education Programs (OSEP), completed a long-term, multi-site study to determine which treatments had the greatest positive effect on reducing AD/HD symptoms. This study is known as the MTA study (The MTA Cooperative Group, 1999). MTA stands for *multi-modal treatment study of children with AD/HD.*

The recommended multi-modal treatment approach consists of four core interventions:

1. patient, parent, and teacher education about the disorder;

2. medication (usually from the class of drugs called stimulants);

3. behavioral therapy; and

4. other environmental supports, including an appropriate school program.

Each of these core interventions is described in more detail below. These approaches are your tool chest.

### *1—Parent, Child, and Teacher Education about the Disorder*

Often, the first treatment step begins with learning what AD/HD is and what to do about it. This knowledge will help you understand that the way your child thinks, acts, and feels has a lot to do with circumstances outside his or her control. When we understand the nature of the challenge, we are better equipped to meet the challenge.

Understanding AD/HD also changes the way in which a child's behavior is viewed. When we know more about AD/HD, we come to understand that *the child has troubles and is not the cause of those troubles.*

There are accommodations that can help your son or daughter adapt reasonably well. It is critical to learn what these accommodations are and to work to see that they are put in place across different environments—school, home, community. Children with AD/HD need strong advocates. They also need to be taught self-advocacy skills if they are to successfully manage their symptoms throughout life. Self-advocacy should begin early in life. Help your child understand and identify his or her difficulties. Teach him or her how to ask for help and accommodations.

### *2—Medication*

The MTA study found medication to be very effective in the management of AD/HD symptoms. Since AD/HD is a neurobiochemically-based problem, it stands to reason that medication that gets to the core of the problem would be effective. The medication most often used is stimulant medication, especially methylphenidate. Most people know this medication as the drug Ritalin. There are other stimulant medications—Concerta, Metadate, Dexedrine, Cylert, and Adderall, an amphetamine compound.

These medications are believed to work by stimulating the action of the brain's neurotransmitters, especially dopamine. With the brain's systems working more efficiently, attention, memory, and executive functions, including inhibition, are improved. The result is better concentration, increased working memory capacity, greater recall, less hyperactivity, and more impulse control. Stimulant medications do not tend to help with symptoms of anxiety or depression (Barkley, DuPaul, & O'Connor, 1999).

The decision to place a child on medication may not be an easy one, especially given the controversy that surrounds the stimulants, specifically Ritalin. There have been many reports that medication is overprescribed for treatment of AD/HD. However, according to the American Medical Association's Council on Scientific Affairs (Goldman et al., 1998), "There is no widespread overprescription of methylphenidate by physicians" (p. 1100). By fol-

lowing good diagnostic procedures, the chances of overprescribing this medication are significantly reduced. Some children cannot take stimulant medications. In these cases, the physician knows what other medications can be helpful in relieving AD/HD symptoms. Medication may not be the right approach for every child.

*Often, the first treatment step begins with learning what AD/HD is and what to do about it. When we understand the nature of the challenge, we are better equipped to meet the challenge.*

Always discuss any medication treatment thoroughly with your child's physician. He or she should explain the benefits and the drawbacks of medication to you and also to your child, if appropriate. When medication is first prescribed, the physician should start with a low dose and then gradually raise it until the symptoms improve. You will need to dispense the medication as prescribed and closely monitor its effects, including any side effects. With stimulants, most side effects are quite mild and go away over time. Since your child spends a large portion of his or her day at school, you will also need to be in contact with your child's teachers to determine positive effects and side effects. Communicate with the physician often, especially when medication is started. Call immediately with any problems or questions.

Also be aware that during adolescence many teens actively resist taking medication. If this happens, it's wise to discuss the situation with your child's doctor. While medication cannot be forced on an unwilling patient, the doctor may have some ideas of how to work with your son or daughter about any resistance to taking the medication.

Some parents are reluctant to place their child on medication for fear that doing so may lead to later substance abuse. Researchers have looked into this concern quite seriously. A recent study supports previous findings that stimulant medication treatment may actually *prevent* later substance abuse (Zametkin & Ernst, 1999). As with any medication, though, parents must carefully monitor its use to be sure that the medication is taken as prescribed.

### 3—*Behavioral Therapy*

As parents and teachers know, AD/HD can cause significant inappropriate behavior. Frequent complaints include failure to follow rules, listen to commands, complete tasks, delay gratification, or control impulse. In addition, some youth may be aggressive or anxious. These symptoms lead to their own set of problems, such as fighting or avoiding tasks. It is very easy for everyone involved—the child, the parents, and the teacher(s)—to be worn down into a pattern of negative, and sometimes hostile, interactions. This cycle, however, can be broken, and different, more positive interactions and behavior patterns can be developed. Knowing more about behavior and how to support behavior that is positive and appropriate is extremely useful information for any parent or teacher of a child with AD/HD.

Researchers have identified effective strategies that parents can use. The following brief explanation gives you an idea of the types of help your son or daughter needs, along with some examples. You can find a lot more help through reading, talking to other parents, and working with a clinician.

You must consider the age of your child and his or her ability before using any strategy. A good rule of thumb is to provide interventions until your son or daughter demonstrates that these are no longer needed. If you withdraw interventions and problems re-occur, put the interventions back in place.

***—Behavior Intervention A—***

**✦ *Be an executive* ✦**

**Provide structure, routines, assistive devices, external supports, and guides.**

Think of the executive as the boss who creates a work environment in which all the workers know what they have to do to do their jobs appropriately. The boss also provides the necessary structure for them to do so. Performance expectations and company rules are clear. The executive supervises and directs but does not overmanage or micro-manage. Children who have difficulty with planning, thinking, organizing, concentrating, and self-monitoring need to have systems in place to guide and direct them. Parents and teachers need to be the executives in the child's life.

*Examples:*

- Make your expectations clear. Say, "I expect you to..."
- Try to do things at the same time every day—homework, playtime, recreation, bedtime. Post the schedule on the fridge.
- When making schedule changes, give advance warning as much as possible.
- Have simple systems for organization—where to keep possessions and needed items such as backpacks, gym clothes, pens, and so on.
- Use homework organizers, notebook organizers, day planners, weekly planners, computers, or even laptops—when called for.
- Do backpack cleaning and notebook organization once a week.

*Understand that you and your child's teachers will need to provide much more direct supervision than seems necessary for the chronological age.* Remember, AD/HD is a developmental disability, so these youth usually fall short of age expectations.

*—Behavior Intervention B—*

***✦ Develop behavior management strategies ✦***

Use positive attention, rules and consequences, and formal systems such as contracts and charts.

The main goal of all behavior management strategies is to increase the child's appropriate behavior and decrease inappropriate behavior. The best way to influence any behavior is to pay attention to it. Thus, the best way to increase a desirable behavior is to *catch the child being good.*

Children with AD/HD receive a tremendous amount of negative feedback. Parents and teachers need to learn to give much more positive attention and feedback. That means you have to pick your battles carefully and let a lot of nonessential stuff slide. Otherwise, increased conflict and arguments between you and your child can result.

How do you make the bulk of your interactions positive and yet still provide discipline? With thought and planning. Effective parents (and teachers) know ahead of time what behavior is acceptable and not acceptable. They know what issues they are willing to negotiate and which ones, like safety, are non-negotiable. In a nutshell: Don't sweat the small stuff, and don't ignore the good stuff no matter how small.

Much of behavior management is about changing what you do. Your house rules (or the classroom rules) need to be carefully designed. First, you want to structure them so that your child or teen will be able to meet the expectations. In other words, you don't wait for a behavior to happen or not happen. You change what happens *before* the behavior—head it off at the pass, so to speak. For instance, if your child constantly forgets things for school, design a system for where to put things so they get picked up on the way out the door.

Your son or daughter needs to know ahead of time what behavior is expected. He or she also needs to know what the consequences will be for behaving (following the rules) or misbehaving (breaking the rules). Consequences are given as soon as possible. Give far more positive consequences and rewards than punishment. Children who hear too much negative feedback often become oppositional or depressed. Managing behavior thoughtfully, without a lot of reaction, especially undue punishment or criticism, helps to prevent unwanted side effects of poorly managed AD/HD.

Some families need to use formal behavior management systems. These include charts or contracts. The difference between the two is simple.

Generally, *contracts* are used during early to mid-adolescence. In a contract, the involved parties (usually the parents and child, or teacher and student) talk about certain chores or obligations that the youth will fulfill. They draw up an agreement. The youth receives certain agreed-upon privileges or rewards for meeting the terms of the contract.

*Charts* are usually used for children ages 11 or younger. A chart lists behaviors that the child must display. Points are given or taken away depending on the child's behavior. Accumulated points may be traded for rewards.

If you decide to make a behavior modification chart, you may wish to follow these three simple steps.

- Make a list of problematic behaviors or ones that need improving.
- Select three to five behaviors from the list. Review the list and, with input from your child, select the behaviors to work on. Pick behaviors that occur on a daily or frequent basis, such as doing homework, going to bed on time, being respectful to all family members, or doing chores.

- Create a reward system. Assign a point value to each listed behavior. Throughout the day, give points for appropriate behavior. At the end of the day or week, your child can "cash in" points for rewards or privileges that have been agreed upon in advance.

In order for rewards to work, they must have value to the child. Since children with AD/HD tend to become disinterested in the same thing over time, the rewards usually need to be changed frequently to have value. (For more detailed information on how to design and use charts and contracts, see the suggested reading list starting on page 21.)

*About punishment:* Children and teens with AD/HD respond best to motivation and positive reinforcement. It is best to avoid punishment. When punishment is necessary, use it sparingly and with sensitivity. It is important that you and your child's teachers respond to the inappropriate behavior without anger and in a matter-of-fact way. Your child needs to be taught to replace inappropriate with appropriate behavior.

*About time-out:* When your child is misbehaving or out of control, time-out can be an effective way to manage the problem. Time-out means that your child is sent for a short period of time to a previously agreed-upon place—usually out of the main hub, like a special chair or area of a room. In general, he or she stays in time-out and must be quiet for three to five minutes. The time-out place should not be a traumatic place, such as a closet or dark basement. The purpose of time-out is to provide a cooling off place where your child can regain control.

Time-out works best with preadolescent kids. You can also use time-out with teens. Usually that means asking your teen to go to his or her room until he or she calms down.

*—Behavior Intervention C—*

✦ ***Use problem solving*** ✦
Develop skills in the art of negotiation, give and take, and conflict resolution through peaceful means.

Problem solving helps take the reaction out of parenting. It is results-oriented. If your child is mature enough, involve him or her in this process. Good problem solving has three parts:

- accurately defining the problem,
- coming up with workable solutions, and
- evaluating results and trying something else, if necessary.

Very often, people spend a lot of time solving the wrong problem. It's important to analyze problem areas. Pay attention to the facts and not the emotions of the situation. Brainstorm to find possible solutions. Put down all ideas that come to mind. Evaluate them. Pick the one that seems most likely to work. Go back to the drawing board if it doesn't. This approach helps to stop conflict from escalating.

For example: Suppose your child argues when you ask him or her to do a chore. While it appears as if arguing is the problem, actually that behavior might be the result of some problem with the request to do chores. Instead of focusing on the arguing, direct your attention to the chore and what that problem is. For instance, do you have a regular chore schedule? Are expectations clear? Does the child understand all the task expectations? Is there a definite time line? To some children, picking up the room means moving a couple of things out of the way.

Once you clearly define the problem, then you can brainstorm for a workable solution. Let's say your child understands all aspects of the chore, but it still doesn't get done without your nagging or threatening. Come up with a plan where the child knows exactly what to do by when. Decide if reminders will be given. Give a reward for on-time chore completion. Give a bonus if the chore is done ahead of time. Penalize the child if the chore is not done on time, but don't nag. Take action. Don't react. Make not doing the chore the child's problem and not yours.

*—Behavior Intervention D—*

✧ ***Use good communication skills*** ✦

Say what you mean in a firm, loving way. Practice listening without judgment and discussion without attack. *Recognize that your child with AD/HD has trouble listening. Be brief and to the point.*

Screaming, yelling, speaking through clenched teeth, stamping feet, throwing things, finger pointing, and making threats are violent forms of communication. These escalate problems, as do putdowns, sarcasm, lecturing, preaching, and name calling. When we are using good communication skills, we:

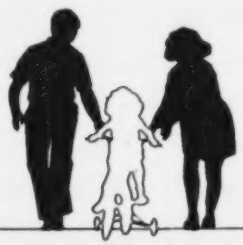
- let the speaker finish,
- concentrate on what is being said,
- show interest,
- avoid judgment,
- eliminate putdowns,
- express our agreement, and
- use praise.

Problem solving and good communication help to eliminate some of the oppositional and hostile encounters that often accompany the disorder of AD/HD.

### *4—Educational Interventions*

One of the most critical areas in which to offer support is in the school arena. This is where most children with AD/HD experience the greatest difficulty. That is because schools require great skill in the areas where students with AD/HD are the weakest: attention, executive function, and memory. Although AD/HD does not interfere with the ability to learn, it does wreak havoc on performance. Behavior problems, which usually get the most attention, may actually be by-products of the school environment and AD/HD. These usually occur when tasks are too long, too hard, or lack interest. Many behavior problems can be avoided or lessened by adapting the school setting to fit the needs of the student.

In the school arena, AD/HD is an *educational performance problem.* When little or nothing is done to help children with AD/HD improve their performance, over time they will show academic achievement problems. This underachievement is not the result of an inability to learn. It is caused by the cumulative effects of missing important blocks of information and skill development that build from lesson to lesson and from one school year to the next. (It



## Ways to Improve Life in General

***Become Proactive.*** Knowledge is power. Gain knowledge about AD/HD so you understand why and how this disability affects your son or daughter at home, in school, in social situations, and how it affects your entire family.

***Change Your Belief System.*** Before your son or daughter can change his or her self-concept, the adults in the child's life have to change the way they view him or her. Separate the child from the behavior, and then separate the child from the disability. We don't have "AD/HD children." We have children who have AD/HD.

***De-stress.*** Find positive ways to soothe yourself. For example, exercise, meditate, take long walks. Less stress means better self-control. Look for the humor in things, and enjoy a good laugh.

***Act, Don't React.*** Emotional responses such as blame and anger lessen when you stop, look, listen, and then respond. Thoughtful parenting is needed here.

***Catch the Child Being Good.*** The home atmosphere and the child's sense of self-worth change when the air fills with words of praise and encouragement. Pay plenty of positive attention to your son or daughter. Reward and show appreciation when he or she does what is expected.

should be noted that a number of students with AD/HD also have learning disabilities, and these *do* interfere with the ability to learn.)

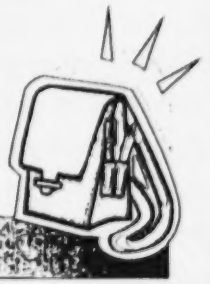
Generally, AD/HD will affect the student in one or more of the following performance areas:

- starting tasks,
- staying on task,
- completing tasks,
- making transitions,
- interacting with others,
- following through on directions,
- producing work at consistently normal levels, and/or
- organizing multi-step tasks.

Those teaching or designing programs for students with AD/HD need to pinpoint where each student's difficulties occur. Otherwise, valuable intervention resources may be spent in areas where they are not critical.

For example, one child with AD/HD may have difficulty starting a task because the directions are not clear. Another student may fully understand the directions but forget to follow all of them. Another may have difficulty making transitions and, as a result, get stuck in the space where one task ends and another begins. With the first child, intervention needs to focus upon making directions clear and in helping the child to understand those directions. The second child would need guidance to follow all the directions. The third child would need help in making transitions from one activity to another.

The sooner educational interventions begin, the better. They should be started when educational performance problems become evident and should not be delayed because the child is still holding his or her own on achievement tests. Specific suggestions for educational interventions are presented in Section III of this *Briefing Paper*. Other school issues, including special education, are discussed there as well.



## III. School Issues & Interventions

In the elementary years, AD/HD usually causes these problems:

- off-task behavior,
- incomplete or lost assignments,
- disorganization,
- sloppy work or messy handwriting,
- not following directions,
- errors in accuracy,
- inconsistent performance,
- disruptive behavior or spacey, daydreaming behavior, and/or
- social interaction difficulties.

Around middle school and into high school and beyond, most of these problems continue. However, additional ones arise. That is because adolescents are expected to be much more independent and self-directed. They receive less supervision. Demands for concentration and more sophisticated thinking and problem solving increase. AD/HD makes it hard to meet those demands.

Given the additional problems that seem to arise in middle school and beyond, it's not unusual to see a student who's gotten by in earlier grades dive bomb academically around puberty.

The thinking difficulties associated with AD/HD do not have to do with intellectual ability. Instead, they arise out of problems with concentration, memory, and cognitive organization. Typically, AD/HD-related memory problems arise in two areas:

- *working memory*—which helps the student keep one thing in mind while working on another, and
- *retrieval*—being able to locate on demand information that has been learned and stored in memory.

Many students also show problems in:

- time management,
- prioritizing work,
- reading comprehension,
- note taking,
- study skills, and
- completing multi-step tasks.

Clearly, a student with AD/HD can have difficulty in any number of academic areas and with critical academic skills. Thus, it is extremely important that the school and parents work together to design an appropriate educational program for the student. This

program needs to include the accommodations, modifications, and other services necessary to support the student academically and promote successful learning and appropriate behavior.

### Will Special Education Help My Child?

*Special education* is instruction that is specially designed (at no cost to parents) to meet the unique needs of a child with a disability. "Specially designed" means adapting the content, methodology, or delivery of instruction (as appropriate) to the needs of the child, in order to:

- address the unique needs of the child that result from his or her disability, and
- ensure the child's access to the general curriculum (the same curriculum as for students without disabilities) so that he or she can meet the educational standards that apply to all children within the school district or jurisdiction.

Because special education is specially designed instruction, it may be very helpful to your child. However, not all children with AD/HD need, or are eligible for, special education services. Conversely, many would not be able to receive an appropriate education *without* special education services.

### How Is My Child Found Eligible for Special Education?

The process by which a child is found eligible for special education services is described within the federal law known as the Individuals with Disabilities Education Act, or IDEA. The IDEA is the federal law under which schools:

- evaluate children for the presence of a disability and their need for special services, and
- provide special education and related services to students who meet eligibility requirements.

Eligibility decisions about a child's need for special education and related services are made on a case-by-case basis. School districts may not arbitrarily refuse to either evaluate or offer services to students with AD/HD.

In order for your child to be eligible, he or she must have a disability according to the criteria set forth in the IDEA or under state law (state law is based on the IDEA). The disability must adversely affect his or her educational performance. Thus, a medical diagnosis of AD/HD alone is not enough to make your child eligible for services. Educational performance, which consists of social, emotional, behavioral, or academic performance, must be adversely affected.

Presently, the IDEA lists 13 categories of disability under which a child may be found eligible for special education. AD/HD is specifically mentioned in the IDEA as part of its definition of "Other Health Impairment." The definition of this disability is provided on page 9.

Certain steps typically need to be taken in order for the child with AD/HD to be found eligible for special education services. These steps are:

1. The child must be experiencing educational performance problems.

2. When such problems become evident, the parent, teacher, or other school staff person must request that the child be evaluated for the presence of a disability.

3. The child is evaluated to determine if he or she does indeed have a disability and to determine the nature and extent of the child's need for special education and related services.

4. A group of individuals, including the parents, meets to review the evaluation results and determine if the child meets eligibility criteria set forth in state and federal law. If so, the child is found eligible for special education and related services.

If your child is found eligible for special education, you will then collaborate with school personnel to develop what is known as an *Individualized Education Program* (IEP). Your child's IEP is a written document that spells out, among other things, how your child's specific problems and unique learning needs will be addressed. The IEP considers strengths as well.

If a child's behavior impedes learning (including the learning of others), the parents and school must consider, if appropriate, strategies to address that behavior. This includes positive behavioral interventions, strategies, and supports. This proactive approach to addressing behavior problems is intended to help individual students minimize discipline problems that may arise as a result of the disability. If your child has behavior problems, you will want to make sure that these are addressed in his or her IEP.

After specifying the nature of your child's special needs, the IEP team (which includes you) determines what types of services are appropriate for addressing those needs. The IEP team also decides where your child will receive these services—for example, the regular education classroom, a resource room, or a separate classroom.

The IEP is a very important document in the lives of students with disabilities. There is a lot to know about how it is developed, what type of information it contains, and what part you, as a parent, play in writing it. More detailed information about the IEP process is available from NICHCY, either by contacting us directly (at 1-800-695-0285) or by visiting our Web site (www.nichcy.org).

## What Do I Do If My Child Is Not Eligible for Services?

Under IDEA, the school system must tell you in writing why your child was found "not eligible." It must also give you information about what you can do if you disagree with this decision. There are legal actions and remedies available. Each state has specific procedures required by the IDEA that must be followed.

Read the information the school system gives you. Make sure it includes information about how to challenge the eligibility decision. If that information is not in the materials the school gives you, ask the school for it.

Also get in touch with your State's Parent Training and Information (PTI) center. The PTI can tell you what steps to take next. Your PTI is listed on NICHCY's *State Resource Sheet* for your state.

It is also helpful to know that students with AD/HD may be eligible for services under a different law—Section 504 of the Rehabilitation Act of 1973. Section 504 is a civil rights law prohibiting discrimination on the basis of a disability. Any school district that receives federal funds must follow this law. Under Section 504, a person with a disability means any person with an impairment that "substantially limits one or more major life activities." Since learning is considered a major life activity, many students with AD/HD qualify as a "person with a disability" under Section 504. Schools are then required to provide them with a "free appropriate public education," which can include regular or special education services, depending upon each student's specific needs.

Therefore, if your child is found ineligible for services under IDEA, ask to have your child evaluated under the criteria of Section 504. Many children are not eligible for services under IDEA but *are* eligible under Section 504.

*Whether your child receives services under IDEA, Section 504, or another program designed to help students with special needs, it is important that the intervention be tailored to meet your child's individual needs.*

## What Can Teachers Do To Help a Child with AD/HD?

Whether your child receives services under IDEA, Section 504, or another program designed to help students with special needs, it is important that the intervention be tailored to meet your child's individual needs. One size *does not* fit all. Work with the school to identify the nature of your child's special needs and to design an educational program suited to those needs.

In addition to the core interventions described in the previous section, there are a number of other educational interventions that can potentially help students with AD/HD. This section looks at some of the more common interventions, modifications, and adaptations.

***Select a Supportive Teacher***

✓ Try to place the student with teachers who are positive, upbeat, flexible, and highly organized problem-solvers. Teachers who praise liberally and who are willing to "go the extra mile" to help students succeed can be enormously beneficial to students with AD/HD.

***Adapt Curriculum and Instruction***

- ✓ Provide more direct instruction and as much one-on-one instruction as possible
- ✓ Use guided instruction
- ✓ Teach and practice organization and study skills in every subject area
- ✓ Lecture less
- ✓ Design lessons so that students have to *actively* respond—get up, move around, go to the board, move in their seats
- ✓ Design highly motivating and enriching curriculum with ample opportunity for hands-on activities and movement
- ✓ Eliminate repetition from tasks or use more novel ways to practice
- ✓ Design tasks of low to moderate frustration levels
- ✓ Use computers in instruction
- ✓ Challenge but don't overwhelm
- ✓ Change evaluation methods to suit the child's learning styles and strengths

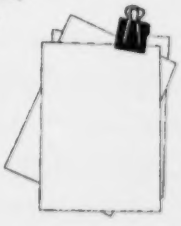
***Provide Supports to Promote On-Task Behavior***

- ✓ Pair the student with a study buddy or learning partner who is an exemplary student
- ✓ Provide frequent feedback
- ✓ Structure tasks
- ✓ Monitor independent work

- ✓ Schedule difficult subjects at the student's most productive time
- ✓ Use mentoring and peer tutoring
- ✓ Provide frequent and regularly scheduled breaks
- ✓ Set timers for specific tasks
- ✓ Call attention to schedule changes
- ✓ Maintain frequent communication between home and school
- ✓ Do daily/weekly progress reports
- ✓ Teach conflict resolution and peer mediation skills

***Provide Supports to Promote Executive Function***

- ❑ *To support planning:*
  - ✓ Teach the student to use assignment pads, day planners or time schedules, task organizers and outlines
  - ✓ Teach study skills and practice them frequently and in all subjects
- ❑ *To increase organization:*
  - ✓ Allow time during school day for locker and backpack organization
  - ✓ Allow time for student to organize materials and assignments for homework
  - ✓ Have the student create a master notebook—a 3-ring binder where the student *organizes* (rather than stuffs) papers
  - ✓ Limit number of folders used; have the student use hole-punched paper and clearly label all binders on spines; monitor notebooks
  - ✓ Have daily and weekly organization and clean up routines
  - ✓ Provide frequent checks of work and systems for organization
- ❑ *To improve follow through:*
  - ✓ Create work completion routines
  - ✓ Provide opportunities for self-correction
  - ✓ Accept late work
  - ✓ Give partial credit for work partially completed
- ❑ *To improve self-control:*
  - ✓ Prepare the student for transitions
  - ✓ Display rules
  - ✓ Give behavior prompts
  - ✓ Have clear consequences
  - ✓ Provide the student with time to de-stress
  - ✓ Allow doodling or other appropriate, mindless motor movement
  - ✓ Use activity as a reward
  - ✓ Provide more supervision



***Memory Boosters***

❑ *To assist with working memory:*

- ✓ Focus on one concept at a time
- ✓ List all steps
- ✓ Write all work down
- ✓ Use reading guides and plot summaries
- ✓ Teach note-taking skills—let the student use a study buddy or teacher-prepared notes to fill in gaps
- ✓ List all key points on board
- ✓ Provide summaries, study guides, outlines, and lists
- ✓ Let the student use the computer

❑ *To assist with memory retrieval:*

- ✓ Teach the student memory strategies (grouping, chunking, mnemonic devices)
- ✓ Practice sorting main ideas and details
- ✓ Teach information and organization skills
- ✓ Make necessary test accommodations (allow open book tests; use word banks; use other memory cues; test in preferred modality—e.g., orally, fill in blank; give frequent quizzes instead of lengthy tests)

***Attention Getters and Keepers***

❑ *For problems beginning tasks:*

- ✓ Repeat directions
- ✓ Increase task structure
- ✓ Highlight or color code directions and other important parts
- ✓ Teach the student keyword underlining skills
- ✓ Summarize key information
- ✓ Give visual cues
- ✓ Have the class start together

❑ *For problems sticking with and finishing tasks:*

- ✓ Add interest and activity to tasks
- ✓ Divide larger tasks into easily completed segments
- ✓ Shorten overall tasks
- ✓ Allow the student choice in tasks
- ✓ Limit lecture time
- ✓ Call on the student often

## About the Author...

Mary Fowler is an author, advocate, educator, and AD/HD coach, as well as an internationally recognized expert on AD/HD. Her best-selling book, *Maybe You Know My Kid: A Parent's Guide to Attention Deficit Hyperactivity Disorder*, is published in several languages. Her newest book, *Maybe You Know My Teen: A Parent's Guide for Adolescents with ADHD* (2001), is published by Broadway Books. Mary also serves as a consultant to NICHCY on several writing projects, including this *Briefing Paper*.

Mary has testified before Congress on educational issues and presented numerous workshops for parents and educators both in the United States and abroad. Mary's workshops offer the most current information on brain-based learning, AD/HD, and behavior, as well as the practical applications of this information. Visit her Web site at: www.maryfowler.com

## IV. Meeting the Challenge

There is no question that AD/HD creates plenty of opportunity to overcome adversity. Why are some children and families better able to meet the challenges AD/HD presents? The answer can be glimpsed in the research that's been done on *resilience*.

Resilience does not mean avoiding adversity or sailing off into the sunset. To be resilient is to adapt despite challenges and threatening circumstances.

AD/HD places children and youth at risk for a number of life problems. Research shows that certain protective factors help at-risk children and youth to minimize the possibility of negative affects. Among these helpful protective factors are:

- ordinary parents,
- connection to competent and caring adults,
- self-efficacy (the power or ability to produce a desired outcome),
- intellectual ability,
- pleasing personality,
- talents valued by society, and
- being able to control one's self—one's attention, emotion, arousal, and behavior. (Masten, 1999)

When researchers Weiss and Hechtman (1993) did follow-up studies on adults with AD/HD who managed to successfully meet their challenges, the adults overwhelmingly identified one main reason for their success: *Someone believed in them.*

Most often that someone was a parent. Still, other caring adults such as coaches, teachers, and spouses, also filled them with hope and a belief in self.

To help your son or daughter develop a sense of well-being, think about the above list of protective factors. Which ones can you help your child develop?

Remember, AD/HD is not a matter of *can't* or *won't*. It's a matter of *can* and *will*—with the right recognition and help.

### Where can I find support?

For parents, teachers, and children challenged by this disorder, AD/HD can be a truly unique experience. While some days the struggles seem insurmountable, it's important to realize that when AD/HD is properly managed children with AD/HD can turn some of their liabilities into assets, and they can minimize the others.

Meanwhile, there is help and hope available. Parent support groups exist in every state. Some, like CHADD and National ADDA, are AD/HD-specific. Others like the Learning Disabilities Association and Parent's Anonymous may also be useful, depending on your individual circumstances. Visit the Web sites of these groups (see "Resources" on page 21), where you'll find information on activities and contact numbers of similar groups in your area.

### 10 Ways to Teach Your Children Well

10. Help your child identify his or her areas of strength.
9. Help him or her to identify areas of weakness and ways to work around them.
8. Teach self-advocacy skills.
7. Be your child's strongest advocate.
6. Create opportunities for success—no matter how large or small, like special chores.
5. Play or do activities with him or her.
4. Encourage your child's special interests.
3. Enroll him or her in extra-curricular activities.
2. Help your child find a niche.
1. Be your child's biggest fan.

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# VI. Resources

## Organizations

**CHADD (Children and Adults with Attention-Deficit/Hyperactivity Disorder)**, 8181 Professional Place, Suite 201, Landover, MD 20785. Telephone: (800) 233-4050; (301) 306-7070. E-mail: national@ chadd.org Web: www.chadd.org

**Learning Disabilities Association (LDA)**, 4156 Library Road, Pittsburgh, PA 15234-1349. Telephone: (412) 341-1515. E-mail: info@ldaamerica.org. Web: www.ldanatl.org

**National Attention Deficit Disorder Association (ADDA)**, 1788 Second Street, Suite 200, Highland Park, IL 60035. Telephone: (847) 432-2332 (to leave a message). E-mail: mail@add.org Web: www.add.org

**Parents Anonymous**, 675 W. Foothill Blvd., Suite 220, Claremont, CA 91711. Telephone: (909) 621-6184. E-mail: parentsanonymous@parentsanonymous.org Web: www.parentsanonymous.org


***See listing of additional organizations in the box on the next page.***


### Obtaining Resources of Interest

*The names and addresses of the publishers (e.g., Guilford) of these materials are provided on page 23.*

## Books and Videos on AD/HD


Barkley, R. (1997). *ADHD and the nature of self-control*. New York: Guilford.

Barkley, R. (2000). *A new look at ADHD: Inhibition, time, and self-control* [video]. New York: Guilford.

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Brooks, R., & Goldstein, S. (2001). *Raising resilient children*. New York: NTC/Contemporary.

Dendy, S.A.Z. (1995). *Teenagers with ADD: A parents' guide*. Bethesda, MD: Woodbine House.

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National Institutes of Health. (1998). Diagnosis and treatment of attention deficit hyperactivity disorder. *NIH Consensus Statement, 16*(2), 1-37 [On-line]. Available: odp.od.nih.gov/consensus/cons/110/110_statement.htm

Power, T.J., Karustis, J.L., & Habboushe, D.F. (2001). *Homework success for children with ADHD: A family-school intervention program*. New York: Guilford.

Weingartner, P.L. (1999). *ADHD handbook for families: A guide to communicating with professionals*. Washington, DC: Child Welfare League of America.

Wilens, T. (1998). *Straight talk about psychiatric medications for kids*. New York: Guilford.

Wodrich, D.L. (2000). *Attention deficit hyperactivity disorder: What every parent wants to know* (2nd ed.). Baltimore, MD: Paul H. Brookes.

Zentall, S., & Goldstein, S. (1999). *Seven steps to homework success*. Plantation, FL: Speciality Press.

## Resources on Conditions That Can Co-Occur with AD/HD

Barkley, R.A. (1997). *Managing the defiant child: A guide to parent training* [video, with companion manual]. New York: Guilford.

Dacey, J.S., Fiore, L.B., & Ladd, G.T. (2000). *Your anxious child: How parents and teachers can relieve anxiety in children*. San Francisco: Jossey-Bass.

Green, R. (1999). *The explosive child: A new approach for understanding and parenting easily frustrated, 'chronically inflexible' children*. New York: HarperCollins.

Koplewicz, H.S. (1997). *It's nobody's fault: New hope and help for difficult children and their parents*. New York: Times Books.

Manassis, K. (1996). *Keys to parenting your anxious child*. Hauppauge, NY: Barrons Educational Series.

Papolos, D.F., & Papolos, J. (2000). *The bipolar child: The definitive and reassuring guide to childhood's most misunderstood disorder*. New York: Broadway Books.

Rapee, R.M., Spence, S., Cobham, V., & Wignall, A. (2000). *Helping your anxious child: A step-by-step guide for parents*. Oakland, CA: New Harbinger.

Riley, D.A. (1997). *The defiant child: A parent's guide to oppositional defiant disorder*. Dallas, TX: Taylor.

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## Free Information!

For free information about a variety of disorders, including AD/HD, anxiety, conduct disorders, bipolar disorder, oppositional defiant disorder, and depression, visit these Web sites or contact the organizations directly:

*Center for the Advancement of Children's Mental Health*, Division of Child and Adolescent Psychiatry, Columbia University, 1051 Riverside Drive, New York, NY 10032.
Telephone: (212) 543-5334.
E-mail: info@kidsmentalhealth.org
Web: www.kidsmentalhealth.org

*Center for Mental Health Services (CMHS), Knowledge Exchange Network (KEN)*, P.O. Box 42490, Washington, DC 20015. Telephone: 1-800-789-2647; 1-866-889-2647 (TTY).
E-mail: ken@mentalhealth.org
Web: www.mentalhealth.org

*National Alliance for the Mentally Ill* (NAMI), Colonial Place Three, 2107 Wilson Blvd., Suite 300, Arlington, VA 22201. Telephone: 1-800-950-6264.
E-mail: helpline@nami.org
Web: www.nami.org

*National Institute on Mental Health* (NIMH), Public Inquiries, 6001 Executive Boulevard, Room 8184, MSC 9663, Bethesda, MD 20892-9663. Telephone: (301) 443-4513; (301) 443-8431 (TTY).
E-mail: nimhinfo@nih.gov
Web: www.nimh.nih.gov/publicat/index.cfm

*National Mental Health Association Resource Center*, 1021 Prince Street, Alexandria, VA 22314-2971.
Telephone: 1-800-969-6642; 1-800-433-5959 (TTY).
E-mail: infoctr@nmha.org
Web: www.nmha.org

## VII. Publishers

**American Association of Children's Residential Centers (AACRC)**, 51 Monroe Place, Suite 1603, Rockville, MD 20850. Telephone: (301) 738-6460.
E-mail: info@aacrc-dc.org Web: www.aacrc-dc.org

**American Psychiatric Publishing**, 1400 K Street, N.W., Washington, DC 20005. Telephone: 1-800-368-5777; (202) 682-6262. Web: www.appi.org

**Barrons Educational Series, Inc.**, 250 Wireless Boulevard, Hauppauge, NY 11788. Telephone: 1-800-645-3476.
Web: barronseduc.com/

**Broadway Books**: The resources that list "Broadway" as publisher are available through your local booksellers or booksellers on-line such as amazon.com. To help readers identify either a local or on-line bookseller, Broadway Books (through Random House) provides this address: www.randomhouse.com/backyard/order.html

**Cambridge University Press**, The Edinburgh Building, Shaftesbury Road, Cambridge England CB2 2RU.
E-mail: directcustserve@cambridge.org
Web: www.uk.cambridge.org

**Center for Applied Research in Education**, contact Pearson Education, P.O. Box 11071, Des Moines, IA 50336. Telephone: 1-800-947-7700. Web: www.phdirect.com

**Child Welfare League of America**, 440 First Street NW, Third Floor, Washington, DC 20001-2085. Telephone: (202) 638-2952. Web: www.cwla.org/pubs/

**Citadel Books**, contact Kensington Publishing Corporation, Dept. CO, 850 Third Avenue, New York, NY 10022.
Telephone: 1-888-345-2665.
E-mail: customerservice@kensingtonbooks.com
Web: www.kensingtonbooks.com

**Guilford Press**, 72 Spring Street, New York, NY 10012.
Telephone: 1-800-365-7006. E-mail: info@guilford.com
Web: www.guilford.com

**HarperCollins**, 1000 Keystone Industrial Park, Scranton, PA 18512. Telephone: 1-800-331-3761; (212) 207-7000.
Web: www.harpercollins.com

**Jossey-Bass**, 989 Market Street, San Francisco, CA 94103-1741. Telephone: 1-800-956-7739; (415) 433-1740.
Web: www.josseybass.com/

**New Harbinger Publications**, 5674 Shattuck Avenue, Oakland, CA 94609. Telephone: (510) 652-0215,
Web: www.newharbinger.com/

**NTC/Contemporary Books**, contact Resilience Partners, 230 South 500 East, Suite 100, Salt Lake City, UT 84102.
Telephone: (801) 532-1484.
Web: www.raisingresilientkids.com/index.html

**Parents Press**, contact Childswork/Childsplay, 135 Dupont Street, Plainview, NY 11803. Telephone: (516) 349-5520.
Web: www.childswork.com.

**Paul H. Brookes Publishing Company**, P.O. Box 10624, Baltimore, MD 21285-0624. Telephone: 1-800-638-3775.
E-mail: custserv@brookespublishing.com
Web: www.brookespublishing.com

**Plenum Publishing**, contact Kluwer Academic Publishers, Order Department, P.O. Box 358, Accord Station, Hingham, MA 02018-0358. Telephone: (781) 871-6600.
E-mail: kluwer@wkap.com
Web: www.wkap.nl/kaphtml.htm/HOMEPAGE

**Simon & Schuster**, 100 Front Street, Riverside, NJ 08075.
Telephone: 1-800-223-2336. Web: www.simonsays.com

**Speciality Press** (now ADD Warehouse),
300 N.W. 70th Avenue, Suite 102, Plantation, FL 33317.
Telephone: 1-800-233-9273. Web: www.addwarehouse.com

**Taylor Publishing Company**: The resources that list "Taylor" as publisher are available through your local booksellers or booksellers on-line such as amazon.com.

**Times Books**, see Broadway Books.

**Woodbine House**, 6510 Bells Mill Road, Bethesda, MD 20817. Telephone: 1-800-843-7323; (301) 897-3570.
Web: www.woodbinehouse.com

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Director . . . . . Suzanne Ripley
Assistant Director . . . . . Donna Waghorn
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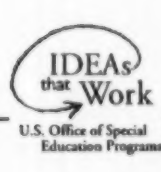


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